

**University of Idaho  
Pedology Laboratory  
Soil and Land Resources Division, College of Agricultural and Life Sciences**

**Soil Series:** Divers Gravelly Silt Loam

**Pedon Number:** 81-ID-0552

**County:** Benewah

**Site Information:** NRCS # 81-ID-009-2-1 to 5

**Elevation:** 5360 ft

**Slope:** 49 %

**Aspect:** NW

**Drainage:** well drained

**Collected by:** NRCS personnel, photo no. 6-38-S

**Classification:** Medial-skeletal, amorphic Typic Haplolyands

**Date Described:** 9/8/1981

**Location:** 0.75 mi NE of St. Joe Baldy; 2300 ft W & 300 ft N of the SE corner of Sec. 36, T. 47N., R. 1W.

**Landform:** mountain slope, very steep

**Parent Material/Geology:** ash over metasediments

**Vegetation:** SAF/Mtn., Hemlock, WWP, VAME, XETE, MOSS, AZAELEA

**Soil Temperature:**

**Soil Moisture:**

**FIELD DATA:**

Lab No.	Horizon	Depth (cm)	Field Texture	Color		Structure	Consistence			Roots	Pores	Features	Efferv.	Boundary						
				Dry	Moist		Dry	Moist	Wet											
--	O1	5-3	--	Slightly decomposed needles, twigs, and leaves.																
--	O2	3-0	--	Well decomposed organic matter.																
1	A1	0-5		7.5YR 5/2	7.5YR 3/2	1vf & f gr	vlo	vfr	so sp	2vf &f, 1m&c	3vf &f,1m t, int.		eo	cw						
2	B21ir	5-28		10YR 5/4	10YR 3/4	1f,m,c sbk	vlo	vfr	so sp	2vf &f, 1m&c	2vf &f,1m t, int.		eo	gw						
3	B22ir	28-46		10YR 6/4	10YR 4/4	1f,m sbk	lo	fr	so sp	2vf &f, 1m&c	2vf &f,1m t, int.		eo	gw						
4	B23ir	46-107		10YR 6/4	10YR 4/4	1f,m sbk	--	lo	so sp	2vf &f, 1m&c	2vf &f,1m t, int.		eo	aw						
5	IIC1	107-152		Cobbles, stones, and gravel with some fines in cracks.																

**PHYSICAL DATA:**

Lab No.	Particle Size Distribution (mm) – Sand						Textural Class	Coarse Fragments <sup>1</sup> (>2 mm)	Bulk Density (Oven-dry)	Water Content		LOI (400 °C) OM	
	VC	C	M	F	VF	Total				Total	33 kPa	1500 kPa	
	(2.0-1.0)	(1.0-0.5)	(0.5-0.25)	(0.25-0.1)	0.1-0.05)	(2.0-0.05)	(0.05-0.002)	(<0.002)					
--	% -----						%	%	W%	g/cc	---- % ----	%	
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1	0.41	0.38	0.47	2.42	5.27	8.96	76.90	14.14	grsil	41		48.6	27.2
2	0.35	0.53	0.66	0.80	9.27	11.61	78.92	9.47	grsil	46		55.3	29.2
3	0.79	1.18	1.17	5.22	9.17	17.54	76.18	6.28	vgrsil	64		57.6	23.4
4	0.52	1.01	1.27	9.15	14.29	26.24	69.04	4.72	egrsil	77		44.8	17.6
5	1.28	2.94	2.85	11.52	13.22	31.81	62.73	5.46	egrsil	96		37.6	17.3

**CHEMICAL DATA:**

Lab No.	pH 1:5	pH Sat.	pH NaF	Elec Cond	Avail. <sup>2</sup> P	NH <sub>4</sub> OAc <sub>pH 7</sub> Exchangeable Cations <sup>3</sup>				Exch. H <sup>+</sup>	KCl-Ext. Al <sup>3+</sup>	CEC <sub>pH 7</sub>	ECEC <sup>4</sup>	Base <sup>5</sup> Sat.	ESP <sup>6</sup>	Org. C	N	C:N
				(dS/m)	mg kg <sup>-1</sup>	Ca <sup>2+</sup>	Mg <sup>2+</sup>	Na <sup>+</sup>	K <sup>+</sup>						%			
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1	5.1	11.3	0.09	0.8	1.5	0.6	0.1	0.6	38.9		25.4		7	7.8	4.5	0.20	22	
2	5.1	11.7	0.06	2.0	0.5	0.3	0.1	0.5	50.1		31.4		3	10.3	6.0	0.26	24	
3	5.9	11.7	0.42	0.0	0.3	0.1	0.1	0.3	26.7		16.9		3	3.0	1.7	0.09	18	
4	5.4	11.6	0.34	3.3	0.2	0.1	0.1	0.2	24.8		16.7		2	3.0	1.7	0.09	19	
5	5.3	11.5	0.10	2.4	0.3	0.1	0.1	0.4	22.9		14.4		4	2.1	1.2	0.09	15	

**CHEMICAL DATA (cont.):**

Lab No.	Sat. Paste H <sub>2</sub> O	Saturated Paste Extract – Soluble Ions								SAR <sup>7</sup>	Gypsum	CaCO <sub>3</sub>	P Ret.	CBD		Pyro.		AOD			
		Ca <sup>2+</sup>	Mg <sup>2+</sup>	Na <sup>+</sup>	K <sup>+</sup>	CO <sub>3</sub> <sup>2-</sup>	HCO <sub>3</sub> <sup>-</sup>	Cl <sup>-</sup>	SO <sub>4</sub> <sup>2-</sup>					Fe	Al	Fe	Al	Fe	Al	Si	P
%	cmol <sub>c</sub> kg <sup>-1</sup>								%	%	%	%	%	% -----							
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1	88													1.64	0.70	0.42	0.45				
2	90													1.34	0.91	0.28	0.60				
3	86													1.08	0.56	0.03	0.22				
4	78													0.93	0.64	0.05	0.23				
5	83													0.81	0.48	0.04	0.20				

1 Coarse fragments (>2mm) = (wt. coarse fragments >2mm / wt. soil + coarse fragments)\*100

Note: This includes gravels, stones, & cobbles, if information is available.

2 Available phosphorus was extracted with 0.7M sodium acetate pH 4.8.

3 Extractable cations (NH<sub>4</sub>OAc<sub>pH 7</sub>) – soluble cations (saturated paste extract) = exchangeable cations Note: units are meq/100g or cmol<sub>c</sub> kg<sup>-1</sup>

If there are not any soluble cations assume extractable cations are exchangeable.

4 ECEC = Sum of bases + extractable Al<sup>3+</sup>

5 Base Sat % = (sum of bases/sum of bases + H<sup>+</sup>)\*100 or (sum of bases/ECEC)\*100 or (sum of bases/CEC<sub>pH 7</sub>)\*100

6 ESP = exchangeable sodium percent = (Exchangeable NH<sub>4</sub>OAc<sub>pH 7</sub> Na<sup>+</sup>/CEC<sub>pH 7</sub>)\*100

7 SAR = sodium adsorption ratio = [Na<sup>+</sup>] / (([Ca<sup>2+</sup>] + [Mg<sup>2+</sup>] )/2)<sup>1/2</sup> Note: conc. are in meq/L

Note: NH<sub>4</sub>OAc<sub>pH 7</sub> = NH<sub>4</sub>OAc at pH 7.0

CEC<sub>pH 7</sub> = CEC at pH 7.0

CEC<sub>pH 7</sub> solutions were obtained by leaching soil with 10% acidified NaCl. Solutions were analyzed by steam distillation, Technicon Autoanalyzer or by Lachat Quikchem autoanalyzer for N-NH<sub>4</sub>.

Nitrogen and CEC were run on the Technicon Autoanalyzer.

Rock is not accounted for in analyses unless noted on the data sheets.

Soil fraction = wt. of soil (g) / wt. of soil + coarse fragments >2mm (g)

A soil without rock (>2mm) would have a soil fraction of 1.